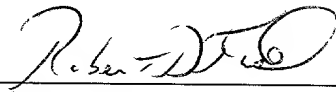


It is therefore respectfully requested that an interference be declared between the divisional application and U.S. Patent No. 6131362 at the earliest possible moment.

Respectfully submitted,  
Fish & Associates, LLP

Dated: 16 Oct 2001

By:   
Robert D. Fish  
Reg. No. 33,880

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**  
**WASHINGTON, D.C. 20231**

**DECLARATION SUPPORTING INTERFERENCE**

Re: Application of Darrell G. Meyer  
Serial No.: Divisional of 09/890514  
Filed : October 12, 2001  
Titled: Weight Bearing Systems And Methods Relating To Same

I, the undersigned, Darrell G. Meyer, hereby declare as follows:

1. I am the applicant in the concurrently filed divisional application.
2. I have been involved in the construction industry since 1961 and have experience with much weight, bearing systems. I have been a California subcontractor and general contractor. I have designed and constructed many types of buildings, both wood frame and steel frame. I have designed machines, framing tables, roof truss assembly fixtures and framing jigs for the steel frame industry.
3. I invented the subject matter of the claims of said divisional application at least as early as March 27, 1996, which is prior to February 4, 1998, the filing date of the application that matured into U.S. Patent No. 6131362, issued October 17, 2000.
4. As set forth hereinbelow, I was not convinced that my inventive designs would be satisfactory for their intended purpose until about January 1999, shortly after which I filed my own patent application. During that entire intervening period I was building prototypes, testing the prototypes, and improving the design. Adequate testing was thought to be especially critical in this field for safety

reasons. Errors in estimating load strength could result in significant loss of property, and even loss of life.

**Rectangular Channel Design**

5. In early 1995 I began focusing on problems relating to metal floor joists (trusses). In particular, I wanted to invent a metal floor joist that would reduce the failure rate and squeaks associated with screw construction. My original idea was to provide a metal floor joist made from three separate sheets of steel, having two channels connected by a web, and held together by welds as opposed to screws. At that time I thought the channels would be "U" shaped or rectangular.
6. On or about March 25, 1995 I prepared a drawing of my conception, a true and correct copy of which is appended hereto as Exhibit 1.
7. In October 1995 I contacted D. Kingston Cable about a possible joint development project for a metal floor joist having "U" shaped or rectangular channels.
8. On October 27, 1995 I prepared and sent a draft non-disclosure/non-competition agreement to Allan MacQuiod, CEO of D. Kingston Cable, regarding a possible U shaped channel design. At this stage I was referring to my company as Trussteel. A true and correct copy of the draft agreement is appended hereto as Exhibit 2.
9. On or about November 6, 1995 I prepared a cash flow projection for Kingston Cable, and sent the same to D. Kingston Cable with drawings. A true and correct copy of the cash flow projection and drawings is appended hereto as Exhibit 3.
10. On or about December 12, 1995, I prepared additional drawings related to the rectangular channel floor joists, a true and correct copy of which is appended hereto as Exhibit 4.

11. On or about December 13, 1995, I prepared additional drawings related to the rectangular channel floor joists, and faxed same to "Saeed" and "Wei", employees at the consulting firm of Gouvis Engineering, in Newport Beach, CA ("Gouvis Engineering "). (See Exhibit A). A true and correct copy of the fax is appended hereto as Exhibit 5.
12. On or about December 20, 1995, I negotiated a joint development agreement with persons at Gouvis Engineering, related to my floor joists. Under the agreement Gouvis Engineering was to provide engineering calculations on the properties of my joist designs. A true and correct copy of the executed agreement (with appended drawings) is appended hereto as Exhibit 6.
13. On or about December 27, 1995, I prepared and sent an additional drawing related to the rectangular channel floor joists, and sent same to persons at Wei at Gouvis Engineering. A true and correct copy of the additional drawing is appended hereto as Exhibit 7.
14. During January or February 1996, I contacted Don Moody, an employee at Western Metal Lath & Steel Framing Systems, Riverside, CA ("Western Metal") about a possible joint development agreement for the rectangular channel floor joists. Mr. Moody responded that he wanted to see cost estimates and information on competitive products.
15. On or about February 14, 1996 I prepared a costs estimate for the rectangular channel floor joists, and met with Mr. Moody to discuss same. A true and correct copy of the costs estimate is appended hereto as Exhibit 8.
16. On or about February 16, 1996 I sent a letter to Mr. Moody confirming our meeting, and offering to provide Mr. Moody with results of the Gouvis Engineering. A true and correct copy of the letter is appended hereto as Exhibit 9.

17. Shortly after February 16, 1996 I received from Mr. Moody a letter confirming the interest of Western Metal in the rectangular channel floor joists. A true and correct copy of the costs estimate is appended hereto as Exhibit 10.
18. On or about February 22, 1996 I searched for competitive information on metal joists, and prepared notes documenting that search. A true and correct copy of my notes is appended hereto as Exhibit 11.
19. On or about February 29, 1996 I received a fax from Gouvis Engineering that contained preliminary engineering strength projections for several of my designs. A true and correct copy of the fax is appended hereto as Exhibit 12.
20. On or about March 8, 1996, I made preliminary calculations of strengths of additional designs. A true and correct copy of my calculations is appended hereto as Exhibit 13.
21. On or about March 12, 1996 I received another fax from Gouvis Engineering, which contained additional engineering strength projections for several of my designs. A true and correct copy of the fax is appended hereto as Exhibit 14.
22. On or about March 26, 1996 I developed a plan for a company that would develop my metal joist designs. A true and correct copy of the plan is appended hereto as Exhibit 15.

**Five-Sided Channel Design**

23. On or about March 27, 1996 I conceived of a new metal joist idea that would include five-sided channels, as claimed in the concurrently filed application.  
A true and correct copy of a drawing of the new idea is appended hereto as Exhibit 16.

24. On or about March 29, 1996 I sent to Gouvis Engineering a copy of drawings containing the new idea with five-sided channels. A true and correct copy of the drawing with notes is appended hereto as Exhibit 17.
25. As of late March 1996 I thought the new idea for five-sided channels would likely worth patenting if: (a) I could adequately build and test a prototype; (b) the prototype would show sufficient strength; and (c) I could figure out a design that could be produced commercially at a satisfactory cost. In the absence of testing, however, I was not at all sure that the contemplated device would work sufficiently for its intended purpose.
26. On or about March 23, 1996 I informed Mr. Don Moody about the new idea with five-sided channels. On or about April 3, 1996 I prepared a draft Letter of Intent between myself and Mr. Moody for joint testing and possible licensing. A true and correct copy of the draft with notes is appended hereto as Exhibit 18.
27. Shortly after April 23, 1996 I received a letter from Mr. Don Moody confirming that Western Metal was interested in mutually developing and marketing a floor joist, provided a product could be satisfactorily developed and tested. A true and correct copy of the draft with notes is appended hereto as Exhibit 19.

#### **First Prototype and Testing**

28. In May 1996 I contacted Lane and Roderick, Inc., to construct an early prototype of a floor joist having five-sided channels. Shortly after May 14, 1996 I received a quote for same from Lane & Roderick, a true and correct copy of which is appended hereto as Exhibit 20.
29. On or about June 3, 1996 the first three prototype joists (trusses) were completed by Lane Roderick and shipped to me. A true and correct copy of the packing slip

is appended hereto as Exhibit 21. The prototype joists were resistance spot welded at Janco Engineering, Corona, California.

30. On or about June 6, 1996, Western Metal wrote a check that paid for the Lane & Roderick services. A true and correct copy of the check is appended hereto as Exhibit 22.
31. Shortly after June 14, 1996, I received a letter from R. F. Tucker, confirming that Radco Certification of Long Beach, California, would test the early prototypes. A true and correct copy of the letter is appended hereto as Exhibit 23.
32. On or about June 18, 1996, I sent a letter to Mr. Don Moody at Western Metal confirming arrangements for conducting the preliminary test. A true and correct copy of the letter is appended hereto as Exhibit 24.
33. On or about July 3, 1996, the first set of preliminary tests was performed by Radco Certification. The set up consisted of 3-20 foot parallel joists covered with plywood and loaded progressively with lead weight to determine deflection and ultimate failure. Failure occurred at single layer of center section at transition from pentagonal chord to folded flanges on diagonal web. Testing was observed by Mr. Don Moody, Mr. Nick Gouvis, Radco staff, and myself. A true and correct copy of the preliminary test results is appended hereto as Exhibit 25. A true and correct copy of a photograph taken during the testing process, and including Mr. Don Moody and Mr. Nick Gouvis, is appended hereto as Exhibit 25.
34. Gouvis Engineering reviewed the preliminary test results, and later in July 1996 Gouvis Engineering provided me with handwritten analysis of the preliminary test results performed earlier in the month. A true and correct copy of the handwritten analysis is appended hereto as Exhibit 26.

**Product Not Deemed Satisfactory For Its Intended Purpose**

35. In July 1996, my reading of the preliminary results and analysis was that the basic idea of floor joists with five-sided channels could be made satisfactory, but only if I could figure out a design that (a) would strengthen the web between the channels, and (b) could be produced commercially at a satisfactory cost. Among other things, I contemplated that a spot welded design would be too slow to be commercially feasible. I therefore set about reworking my design so that it could be produced on a line operating at a speed of at least 60 lineal feet per minute.
36. In late July 1996, I contacted National Machine Exchange, Inc. to determine whether I could adapt some used equipment to provide a make-shift production line.
37. On or about August 6, 1996, I received a quotation for used equipment that might possibly work for the make-shift production line. A true and correct copy of the quotation is appended hereto as Exhibit 27.
38. On or about August 19, 1996, I received a quotation from AL Engineering, Inc, in Santa Ana, CA for other equipment that might possibly work for the make-shift production line. By that stage I had revised the design to include multiple elongated punch outs in the web between adjacent large triangular punch outs. This design change was thought to strengthen the web, but without additional testing I could not be sure. A true and correct copy of the quotation is appended hereto as Exhibit 28.
39. During the period from August 1996 through December 1997, I developed numerous different designs for floor joists with five-sided channels. An example is depicted in the drawing dated August 1, 1997, having a three screw pattern. However, none of my designs during that period were deemed satisfactory to me for their intended purpose, because I hadn't yet established that they could be



produced on a line operating at a speed of at least 60 lineal feet per minute. A true and correct copy of the quotation is appended hereto as Exhibit 29.

**Discussions With Roll-Form Manufacturers**

40. During the Fall of 1997 I concluded that the desired production line speed of 60 lineal feet per minute could not realistically be achieved with resistance sport welding. I therefore began consulting with various roll-form manufacturers.
41. On or about January 7, 1998 I received quotations from a used equipment dealer, National Machinery Exchange, Inc., of Pico Rivera, CA. True and correct copies of the quotations are attached hereto as Exhibit 30.
42. On or about January 8, 1998 I received a proposal from a roll form manufacturer, American Machine & Rollform Tech, Inc. in Salem, OR. A true and correct copy of the letter is attached hereto as Exhibit 31.
43. On or about March 25, 1998, I sent a letter to American Machine & Roll Form inquiring about continuous roll form manufacturing equipment. By this point I has changed the name of my company from Trussteel to SteelWerks. A true and correct copy of the letter is appended hereto as Exhibit 32.
44. On or about April 6, 1998, I sent a letter to The Bradbury Company inquiring about continuous roll form manufacturing equipment. A true and correct copy of that letter is appended hereto as Exhibit 33.
45. Also on or about April 6, 1998, I sent a letter to Eckold A G in Schweiz, Switzerland, inquiring about clinch fastening equipment. A true and correct copy of that letter is appended hereto as Exhibit 34.
46. Shortly after April 17, 1998, I received a quotation from Sim-Vision, regarding machinery that could possibly be used to continuously weld devices incorporating

my then-current five-sided channel joist design. A true and correct copy of the letter is appended hereto as Exhibit 35.

47. On or about June 4, 1998, I conceived of a revised five-sided channel joist having clinches that could be introduced by a continuous roll machine. I sent drawings to Dan Lovelace at American Machine regarding the new idea. A true and correct copy of the drawings is appended hereto as Exhibit 36.
48. Shortly after July 13, 1998, I received quotations from National Machinery Exchange, Inc, Pico Rivera, CA, regarding machinery that could possibly be used to produce the revised five-sided channel joist design. True and correct copies of the quotations are appended hereto as Exhibit 37.
49. On or about July 20 1998, I prepared a drawing depicting how a continuous roll machine could produce the revised five-sided channel joist design. A true and correct copy of the drawing is appended hereto as Exhibit 38.
50. Shortly after July 29, 1998, I received quotations from Sterling Machinery Exchange, South El Monte, CA, regarding additional machinery that could possibly be used to produce the revised five-sided channel joist design. True and correct copies of the quotations are appended hereto as Exhibit 39. True and correct copies of photographs of the contemplated Sterling machinery are appended hereto as Exhibit 39.
51. During the Fall of 1998 I discussed with Mr. Don Moody and several other individuals my design to be manufactured using a continuous roll machine.

**Product Deemed Satisfactory For Its Intended Purpose**

52. In late January 1999 I finally concluded that my design manufactured using a continuous roll machine would very likely work sufficiently for its intended

purpose, and that additional development would only be needed to optimize the design. I therefore contacted my patent attorney in early February to file a patent application. (see below).

53. I also set out to build and test prototypes of the design deemed to be sufficient for its intended purpose. USS/POSCO agreed to participate in the testing.
54. During March 1999 I designed and ordered fabrication of machine tooling from Master Mechanics in Stanton, California. The tooling was necessary to form flanges on the pentagonal and slotted openings in the web section of the joist design. That tooling was delivered on or about March 30, 1999.
55. On or about April 8, 1999 eight 20 foot joists were fabricated by Lane and Roderick, 4 each 18 gauge and 4 each 20 gauge. Clinch Fastening of pentagonal channels was utilized.
56. On or about May 15, 1999, I prepared a drawing that depicted proposed tooling for my latest clinching machine, needed to commercialize the (by then) patent pending joist design. A true and correct copy of the drawing is appended hereto as Exhibit 40.
57. In early June 1999 my joist design prototypes were tested at NAHB Research Center, Inc, in Upper Marlboro, Maryland. The report concluded that although the "steel I joist" exceeded C shape by approximately 25% (weight of material per foot), a better connection detail for a rim track should be investigated. A true and correct copy of the test results are appended hereto as Exhibit 41.
58. Following receipt of the June 1999 test results, I designed a new rim band with diamond shaped stiffening ribs and tabs pre-punched at 8 inch spacing to accommodate attachment to joists for placement at 16 inch or 24 inch centers. On or about June 12, 1999 I prepared a drawing of a rim band design that could be

used with the patent pending joist design. A true and correct copy of the drawing is appended hereto as Exhibit 42.

**Patent Applications**

59. During the summer of 1996, I contemplated filing a patent application on the subject matter of my invention. To that end I searched for prior art at the patent repository at the Los Angeles public library. A true and correct copy of surviving notes from that search are attached hereto as Exhibit 43.
60. During the week of July 25, 1996, I disclosed the basic subject matter of my invention to a patent attorney, Robert D. Fish, and provided Mr. Fish with the originals of my prior art search notes.
61. Mr. Fish conducted an additional search, and told me that the invention appeared to be patentable. He then asked me if I had experimented sufficiently to believe that the invention would work satisfactorily for its intended purpose. I answered that I had not performed such experimentation, and that I was not yet sure that the invention would work satisfactorily for its intended purpose. Based on that information, and my then-current efforts to complete the needed experimentation, Mr. Fish and I agreed to hold off on filing an application until I had determined that invention would work satisfactorily for its intended purpose.
62. As described hereinabove, I spent the next few years completing the needed experimentation.
63. On or about February 2, 1999 I again contacted Mr. Fish, and informed him that I had now completed enough experiments to believe that the invention would work satisfactorily for its intended purpose. I therefore asked Mr. Fish to file a patent application for me.

64. On or about February 5, 1999 Mr. Fish filed a provisional application on my invention, serial number 60/118952.
65. On or about March 31, 1999 Mr. Fish filed a utility application, serial no. 09/282306, claiming priority to the 60/11892 provisional application.
66. On or about February 3, 2000 Mr. Fish filed a PCT application, serial no. PCT/US00/02837, claiming priority to both the 09/282306 and 60/11892 applications.
67. On or about January 9, 2001, the USPTO issued utility application 09/282306 as US patent no. 6170217.
68. On or about July 31, 2001 the PCT application entered national phase in the US, as serial number 09/890514.
69. A divisional of U.S. serial number of 09/890514 is now being filed in order to invoke an interference with the US 6131362 patent.
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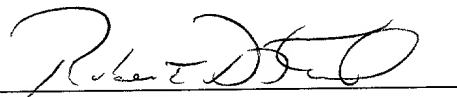
I hereby declare under the laws of United States of America that all statements made herein of my own knowledge are true and that statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Title 18, United States Code, Section 1001, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Executed at Fullerton, California, October 16, 2001.

By:   
Darrell G. Meyer

Respectfully submitted,  
Fish & Associates, LLP

Dated: 16 October 2001

By:   
Robert D. Fish  
Reg. No. 33,880

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